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Hope Lutheran Church
8070 Rowan Rd
Cranberry Twp., PA 16066



Official Rules Booklet for the Girl Scout Pinewood Race

Hosted by
Junior Troop 26667
On
February 17, 2018



girl scouts

Details

Location:

**Hope Lutheran Church
8070 Rowan Rd
Cranberry Twp., PA 16066**

Saturday, February 17th, 9:00 am – Race Day

Doors open at 8:45 am.

The schedule highlights weigh-in and inspection, as well as approximate race times.

Remember:

Once your car is “impounded” (weighed and registered), no adjustments can be made including applying graphite.

There will be pizza provided for each participating girl scout and additional snacks and food for purchase.

The Cub Scouts of Pack 406 will also be selling popcorn.



Eligibility of Contestants and Cars

Construction Tips

Friction is the enemy of speed. Have the scout list all the possible areas where the speed of the car could be reduced due to rubbing or touching of the wheels. Think of design features that could be completed that would help mitigate friction....sand and polish the axles using a hand drill, tooth paste, polishing compound, make sure graphite lubrication is used and applied prior to impoundment. When staging the car on the track, be sure that the car is centered in the lane and is not in contact with the center strip.

Paint must be dry before the day of the race. Paint the car BEFORE the axles are placed into the car. This will help in avoiding getting paint on parts you don't want paint on. The final step should be carefully placing glue on the axel and place them into the axle slots/holes being careful not to get glue in the hub of the wheel or on the axle where the hub of the wheel sits.

Glue the axles into place once satisfied with the alignment. You don't want a wheel coming off as it goes down the track. Make sure you don't get glue on the axle or wheel.

Make sure the car is as close to 5 oz. as possible without going over. Small amounts of weight can be added the day of the race in order to achieve the maximum of 5 oz. Metal weights will typically be required to obtain the maximum weight.

Be sure to choose the correct end for the front of the car and the rear of the car. The front of the car is the end with the longer distance between the axel slot and the end of the block.

Make sure that the wheels are round with no flat spots as when the wheels come out of the box, they have mold marks on them which can slow the car. Chuck the wheel into a drill and lightly sand the mold marks off of each wheel making sure that the wheel is round but also careful not to take too much the plastic tread off. Do not thin the wheel or make any other modification such as drilling holes in the side wall in an attempt to reduce wheel weight.



Eligibility of Contestants and Cars

The tips provided in the next section are not meant to be all inclusive and are by no means consist of the only design features you may want to incorporate into the design of the car. It is recommended that some time be used with each parent/son team to research a little using either the Internet or going to a library to obtain additional information that may help in the design of a car.

Construction Tips

Read all the rules! We don't want to see scouts having their spirits hurt because the car was not built according to the rules.

No major wheel modifications. Wheels will be inspected.

Don't wait until the day before the race to start designing your car.

Make sure the car is up to 5 oz max weight.

Use graphite lubrication for the wheels and axles.

Polish the axles with a polishing compound.

Don't play with the car until AFTER the race is completed, as dirt and other debris can enter the wheel hub and can cause slow performance.



Schedule for 2018 Pinewood Race

Race Day Schedule

Cadettes	930-950am	~1100am
Juniors	950-1000am	~1130am
Brownies	1000-1020am	~1200noon
Daisies	1020-1035am	~1230pm
Voting	1035-1055am	
Winners Announced		1pm
Finals		120pm
Cleanup		2pm



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Eligibility of Contestants and Cars

In the event that a car leaves the track and does not interfere with the other cars, the car will receive 4 points for that particular race.

In the event that a car leaves the track and interferes with the other car(s) (race judges supervising the race will determine which car left its lane), the heat will be re-run. If the car leaves its lane again and interferes with the other car, the interfering car will automatically lose the heat.

Should the car that was interfered with suffer a mechanical issue associated with a collision of the other car leaving its lane and repairs are warranted, a 5-minute period will be provided to the racer to repair their car.

Should a car suffer mechanical damage by leaving its lane through no fault but its own, it must continue to race the heat in which it has started.

At the end of the heat/round, a 5 minute period will be provided to repair the car. The repairs shall consist of only repairing the damaged item.

At no times is additional lubrication allowed. A repair area will be set up where the car can be fixed and will include glue, hobby knife, and other tools that are commonly used to fix a derby car.

If the car suffers further mechanical problems in a later heat, additional time will be granted only at the discretion of the starter based in available time in the race schedule. If repairs are not corrected in a timely fashion and the racer is not ready to go with the starter, the car will automatically receive 4 points for each heat it does not run.

Disputes

Any participant, including the parents of participants, may appeal to the Race Committee for an interpretation of the rules. By a majority of the vote the Race Committee will be the final judge of these rules. In the case of a tie vote, the decision of the Committee Chairman shall be final.



Eligibility of Contestants and Cars

The software assures that all cars still remaining are required to run the same number of heats to keep the number of runs on each car consistent. If there is an uneven amount of cars left such that a heat will not contain 4 cars, a filler car will be used to race in the empty slot.

Cars WILL NOT be ALLOWED TO be RELUBED BEFORE THE FINALS!

The top four placed car results will be final upon completion of the race.

This race format is subject to change should it be deemed necessary by the Pinewood District Race Committee.

Ground Rules

At the start of the race, the scouts name and car number will be called to the starting line. The computer selects the cars at random.

Only the scouts called will be allowed into the staging area/start line.

Scouts must stage their own car. * Starting judges may stage cars if the rank race is running behind in order to speed up the race for the younger scouts.

Once the scouts' car has been staged, the scout will go to the finish line to watch the race and collect their car.

If the starting judge determines that a racer has bumped a previously staged car, the effected racer will have the option to restage their car.

After the cars have been staged, the starting judge will release the starting gate and the race will commence.

After the race the scout will collect their car and return it to the Pit Row area.

Once a car accumulates 12 or more points, the car will be eliminated.

A filler car will be used to fill unused lanes when necessary.



Foreword

This handbook provides guidance on the rules and construction tips for the 2018 Girl Scout Pinewood Race competition scheduled to be held on Saturday **February 17, 2017** at **Hope Lutheran Church.**

These rules have been created to maximize and encourage participation from all scouts. It is imperative for scouts and parents to review these rules prior to participation of the race.

These rules were developed with the mindset that using a few simple household tools such as a hand held drill, sand paper and creative thought; a car will have a chance to compete. Combined with the subjective differences in how folks interpret the *spirit of the rules*, which often has the potential to result in an unlevelled playing field and additional Race Day controversy. All cars will be subject to a pre-race inspection which will be provided prior to the race.

Any car that does not pass the pre-race inspection will be disqualified to race if the noted violation is not addressed prior to the start of the race. Similar to NASCAR, the winning entrants may be subject to a more critical inspection following the race.

A Note to Parents and Guardians about Scout Involvement

Building a Pinewood Race Car with a parent or guardian will likely be one of the Scouting experiences your Scout carries with them to adulthood. Even young Scouts can participate in the design, build, and decoration of their car. If your Scout is too young to use all the tools necessary to complete your project, they will learn from and enjoy making choices about the car design and watching and

learning about how various tools are used. As your Scout's skills grow, they should take a more active role in using age appropriate tools with adult supervision. Without a doubt, winning is fun, but the lessons learned and fun of building the car with your Scout will last much longer than race day.



Eligibility of Contestants and Cars

The Pinewood Derby Competition is open to all Girl Scouts in the Cranberry Service Unit prior to December 19, 2016. After that date, other service units may apply to race.

Scouts will race by rank. The top 3 finishers from each level will qualify for the Grand Champions Race to be held as the last race of the day.

Cars in this competition must have been made for this race season. Cars or parts of cars such as wheels or axles, from previous years may not be used.

The cars shall be constructed using the official Grand Prix Pinewood Derby kit, provided by Tatiana Brower, CoLeader of Troop 26667.

If the owner of a car was a top place finisher from a den race and the owner needs to leave before the finals, the owner of the top place car can either pull out of the race OR assign a fellow scout to set up and race the car. Please notify the race officials before the departure of the winning scout.



Race Format

The race format uses a point accumulation and elimination method.

A race management software system is used called RaceView.

Upon registration, each car will be assigned a pre-determined unique number that will be placed on the bottom of the car which will also have indications on it that verified that the car passed inspection.

Points are assigned to each car according to place of finish.

First Place gets 1 Point

Second Place gets 2 Points

Third Place gets 3 Points

Forth Place gets 4 Points

Each car will race once per round. Once a point threshold of 12 points has been met or exceeded, the car will then be eliminated from the race.

At the end of each round, the points for each car will be tallied.

Each car will race a minimum of 4 times before elimination begins (12 points or more).

The computer software randomly assigns cars to different lanes in each round to face different opponents.

Once the rank division has been reduced to 4 cars, the Division Finals phase begins.

Each car will race 4 times in a row, once in each lane. The car with the lowest accumulated total will be awarded first place. Car with second lowest total will be awarded second and so on and so forth up to the forth place position.

For more information on the race view format, please go to: [www. Raceview.com](http://www.Raceview.com)



Lubrication & Pit Row

Cars may be lubricated before the pre-race inspection, but not between races.

Only dry powdered lubricants, such as graphite or white powder Pinewood Derby Car Lubricant, may be used. Any wet lubricants, liquids, oils and silicon sprays are prohibited. No Graphite Lubrication will be allowed inside the facility. Please apply prior to entry into the facility.

Inspections

On race day, a pre-inspection will be conducted to ensure that the competing cars meet the rules as provided herein. The inspections will consist of a registration station, a weighing station, a length station which will verify critical dimensions such as clearance and width, and a visual inspection station to ensure that no other violations exist such as wheel bearings or wheel shape modification.

Pit Row

After the car has passed all phases of inspection, the car will be impounded and displayed in Pit Row. At no time shall the car be modified once it has been placed in Pit Row other than to fix mechanical issues and discussed later under the 'Ground Rules' section.

It is important that scouts do not touch or play with other cars located in Pit Row. The area will be roped off to limit inadvertent damage to impounded cars. Remember that once the car is impounded, no modifications are allowed. Cars will remain impounded until the completion of the rank in which they are competing is completed. Cars will not be given back upon elimination. The top three cars from each rank will be moved to the Winners Circle and will remain in the Winners Circle until the Grand Champions Race to be held as the last race of the day. The other cars will remain in Pit Row so that the judges can vote on the cars for design awards.



Length, Width & Clearance

It is important to adhere to the length, width, and clearance rules so that all of the cars will seat on the race-track properly. Each car will be inspected prior to the race to ensure that all of the rules have been met.

Maximum overall width (including wheels and axles) shall not exceed 2-3/4"

Minimum width between the left and right wheels shall be 1-3/4" so car will clear the center guide strip.

Minimum clearance between the bottom of the car and track shall be 3/8" so the car will clear the center guide strip.

Maximum length (including wheels) shall not exceed 7".
Maximum height shall not exceed 6".

The wheelbase (distance between the front and rear axles, center to center) may not be changed from the kit body distance of 4-3/8".

Axles must be placed in pre-cut grooves on car. Note: If the block slots are distorted, these slots may be corrected before they are used (as described in booklet that comes with kit), but a wheelbase of 4-3/8" (+/- .25 either way) center to center must be maintained.

The district inspection team uses a pre-manufactured fitting block that the car is placed in to ensure that the dimensions are met. Cars that do not fit into the pre-shaped block will require modifications to ensure that they fit inside the box.

The car must be free-wheeling with no starting device or propulsion, such as rubber bands, moving weights, etc. The car shall not ride on any type of springs.

When in doubt, common sense will usually answer most questions, however if a question arises, please email thsbrower@yahoo.com.



Wheels and Axles

Only the wheels and axles from the official BSA Grand Prix Pinewood Derby kit may be used. Wheels and axles which have been modified by other parties also are prohibited, even if they are from the official kit. Wheels may be lightly sanded and polished to remove imperfections. This light sanding and polishing is the only wheel modification allowed. Beveling, rounding, tapering, thinning, perforating, or any other significant altering of the shape or performance of the wheels or wheel hubs is prohibited. Modification of the cylindrical inner wall of the wheel which contacts the axle is prohibited. See the figures below for some examples of illegal modifications.

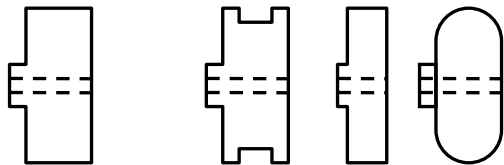
The official BSA wheels have Made in U.S.A. Official B.S.A. printed on the inside hub. They also have small nubs on the outside sidewall that do not affect performance. These nubs must be visible during the Inspection. Any cars that have any portion of the nubs removed such that they do not form a continuous ring around the entire wheel will be disqualified. Wheels must be flat and full width.

**** All four wheels must touch the ground and roll!!
No racing on three wheels!**

Metal wheel bearings, washers and bushings are prohibited.

Axles may be lightly filed, sanded and polished to remove imperfections. This light filing, sanding and polishing is the only axle modification allowed. Significant altering of the axles is prohibited.

The axles must be completely visible and glued into the car so that wheels do not come off during the race.



Smooth Tread Allowed

Illegal Modifications



Weight and Appearance

Axles cannot be embedded higher in the body. No hub caps or wheel covers are allowed.

Weight and Appearance

Weight shall not exceed 5 ounces. The readings of the Official Race Scale will be considered final. The car may be carved, sculpted, and/or sanded in order to enhance performance and appearance.

No loose materials of any kind are permitted on or inside the car.

Additional materials may be added to the car for the following purposes only:

Weights may be added to increase the weight and/or alter the weight distribution of a car as long as the total weight does not exceed the maximum of 5 oz. for the completed car and still fit in the maximum size limits.

Paints/decals/decorations may be added to alter the appearance and/or aerodynamics of a car.

Glue may be used to affix the axles to the car body.

Wood putty, or a similar wood-like substance, may be used to repair minor damage, holes for weights, etc.

Indented noses are prohibited. Cars like the one pictured below will "stage" further down the track, and thus are not traversing the same course as other cars.

Very pointed noses are highly discouraged. Cars with pointed front ends are difficult to stage and may not trip the electronic finish line at the point of crossing. This may result in a disadvantage to the racer.

